

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An xDSL modem transformer having a magnetic core, wherein the magnetic core comprises ~~22.0 to 34.5 mol % MnO, 12.0 to 25.0 mol % ZnO, and the remainder substantially Fe<sub>2</sub>O<sub>3</sub>~~23.8 to 24.2 mol% MnO, 23.0 to 23.4 mol% ZnO, and 52.6 to 53.0 mol% Fe<sub>2</sub>O<sub>3</sub>, and the transformer has a total harmonic distortion of not more than -80 dB at 5kHz.

2. (Currently Amended) ~~The~~An xDSL modem transformer ~~according to claim 1~~having a magnetic core, wherein the magnetic core comprises ~~23.0 to 33.0 mol % MnO, 13.0 to 24.0 mol % ZnO, and the remainder substantially Fe<sub>2</sub>O<sub>3</sub>~~23.0 to 23.4 mol% MnO, 23.4 to 23.8 mol% ZnO, and 53.0 to 53.4 mol% Fe<sub>2</sub>O<sub>3</sub>, and the transformer has a total harmonic distortion of not more than -80 dB at 5kHz.

3-8. (Canceled)

9. (New) The xDSL modem transformer having a magnetic core according to claim 1, wherein the magnetic core comprises

a bottom plate,

a columnar center leg rising from an approximate center of said bottom plate in a first direction, and

an outer leg rising from the bottom plate surrounding at least two sides of the center leg in the first direction separated by a predetermined space,

wherein, a height of the center leg is lower than a height of the outer leg by exactly a predetermined gap and a through gap of substantially the same height as the height of the center leg is formed at part of the top of the outer leg.

10. (New) The xDSL modem transformer having a magnetic core according to claim 2, wherein the magnetic core comprises

a bottom plate,

a columnar center leg rising from an approximate center of said bottom plate in a first direction, and

an outer leg rising from the bottom plate surrounding at least two sides of the center leg in the first direction separated by a predetermined space,

wherein, a height of the center leg is lower than a height of the outer leg by exactly a predetermined gap and a through gap of substantially the same height as the height of the center leg is formed at part of the top of the outer leg.